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CUMULATIVE REWARD WAGE SYSTEM IN DAIREN FAR EAST
ELECTRIC COMPANY PAINT AND VARNISH FACTORY

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 (Principles of Compensation for Work Rendered)
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[This report contains information on the application of the cumulative reward wage system in the Dairen Paint and Varnish Factory and the advantages of this wage system over the piece-work wage system.]

The cumulative reward wage system is a system of rewarding production in excess of a fixed quota by cumulative raises. The production volume for a fixed period (a day or a month) is set at a certain standard. When the workers produce in excess of the quota during the fixed period of time, they are paid extra according to a definite scale. The Dairen Paint and Varnish Factory's calculation method for above-quota production is made according to the following table:

<u>Grade</u>	<u>Degree of Above-Quota Production (%)</u>	<u>Basic Workers' Salary Increases (%)</u>	<u>Accessory Workers' Salary Increases (%)</u>
1	105	110	105
2	110	115	110
3	115	120	115
4	120	125	117
5	125	130	120
6	135	140	130
7	150	150	135
8	160	160	140
9	175	200	170

To determine what the production quota should be, the following factors were taken into consideration: (1) average output under the Japanese, (2) equipment and its capabilities, (3) number of workers, (4) the degree of difficulty of production.

For example, the following specific factors were used in the Dairen Paint and Varnish factory to determine the norms:

There were seven pulverizing machines with either one or two pulverizers attached. The output of the various machines differed. Number one pulverizing machine's highest output was 1,800 kilograms, its average output was 1,295 kilograms, and its standard eight hour production quota was fixed at 1,200 to 1,300 kilograms.

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Number two pulverizing machine with only one pulverizer had a 20 percent lower output than that of number one, and its standard production was set at 1,080 to 1,200 kilograms.

Multipigment paint is more expensive and more difficult to make than paint with only one pigment. The standard for multipigment is 900 to 1,000 kilograms. Minimum output was set at 30 kilograms a month since it cannot be manufactured in a single day.

Wages are calculated as follows. Every production unit must make a daily written work report to the production office. The report must state the ratio of the day's actual production to the fixed standards of production, the amount of raw materials used, if that quantity is in agreement with the fixed standard, and the number of basic workers and auxiliary workers. The report must be filled in by clerks, signed by the shop foreman, and delivered to the production office for checking before being sent to the statistician who makes a monthly report to the accounting office. The accounting office then calculates the wages according to rate of "above-quota production."

The results of the system were that production increased and exceeded the plan, raw materials were saved, production costs were reduced, worker's incomes were increased, and the attitude of the workers improved.

The following problems are yet to be solved. In setting the standard, the whole manufacturing process must be studied. When fixed, the standard must be explained to the workers. If the standard is too high or too low, it must be adjusted promptly to avoid arousing dissatisfaction among the workers. There must be a system of inspection with full time inspectors checking the quantity and quality of output, because to exceed quotas and get more pay, workers will often lower quality and produce inferior goods. In striving to produce more, workers often abuse their machines; so workers must be trained and assigned to a fixed machine for which they are held responsible.

Workers must be prevented from becoming idle. In this factory, the production of buckets is divided into several steps; yet the standard had been based upon the final step only and fixed at 200 buckets in 8 hours. But in other steps of the process the machines are capable of producing 300 units. Therefore, workers in the final step of the process were rushed while those in intermediate steps were idle.

Also, warehouse and transport workers were not enthusiastic about the system, because their work was not defined and it was not possible to set up standards for them. This problem is being temporarily solved by placing the warehousemen under paint shop classification and shipping workers under the bucket shop classification.

Although the cumulative reward wage system has certain faults, it is still a positive method of increasing production. A study of its operations in the Dairen Paint and Varnish Factory showed the following advantages in the use of this system:

The cumulative reward wage system tends to produce a consistently good grade of product, because the workers have to meet standards of quality as well as quantity. An inspection system was set up whereby certain workers are responsible for examining the quality of production. This system also insures proper care of machinery.

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Wages are comparatively high under the cumulative wage system and the workers are assured a minimum wage. The disadvantage is that workers cannot increase their monthly earnings by more than 100 percent. There is a definite limit of compensation for above-quota production. The workers will therefore raise their work rate as high as the maximum 75 percent and then will slacken their work rate, because production in excess of 75 percent has no effect on the worker's income.

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